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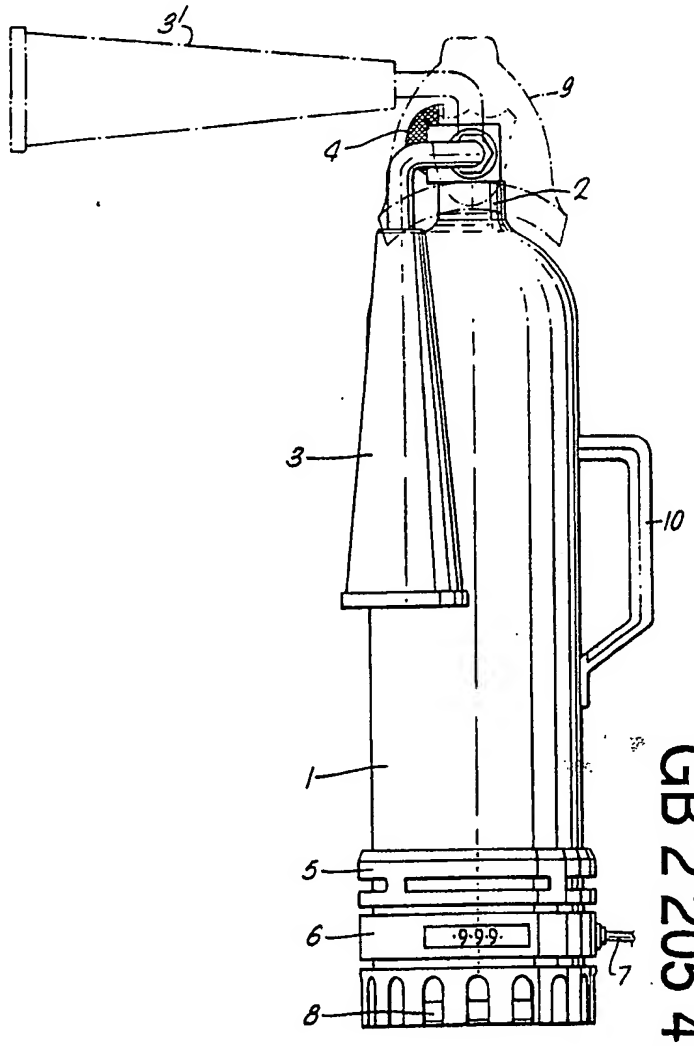
(54) Portable fire extinguisher

(57) A safety apparatus comprises a portable fire extinguisher which incorporates a smoke detector 5 and alarm means 8 actuated in response to the detection of smoke in excess of a predetermined level. The alarm may include a siren and a flashing light. The device may also include an illuminating light which is selectively operable, and may also include means adapted automatically to contact and pass a predetermined message, by telephone, to the emergency services.



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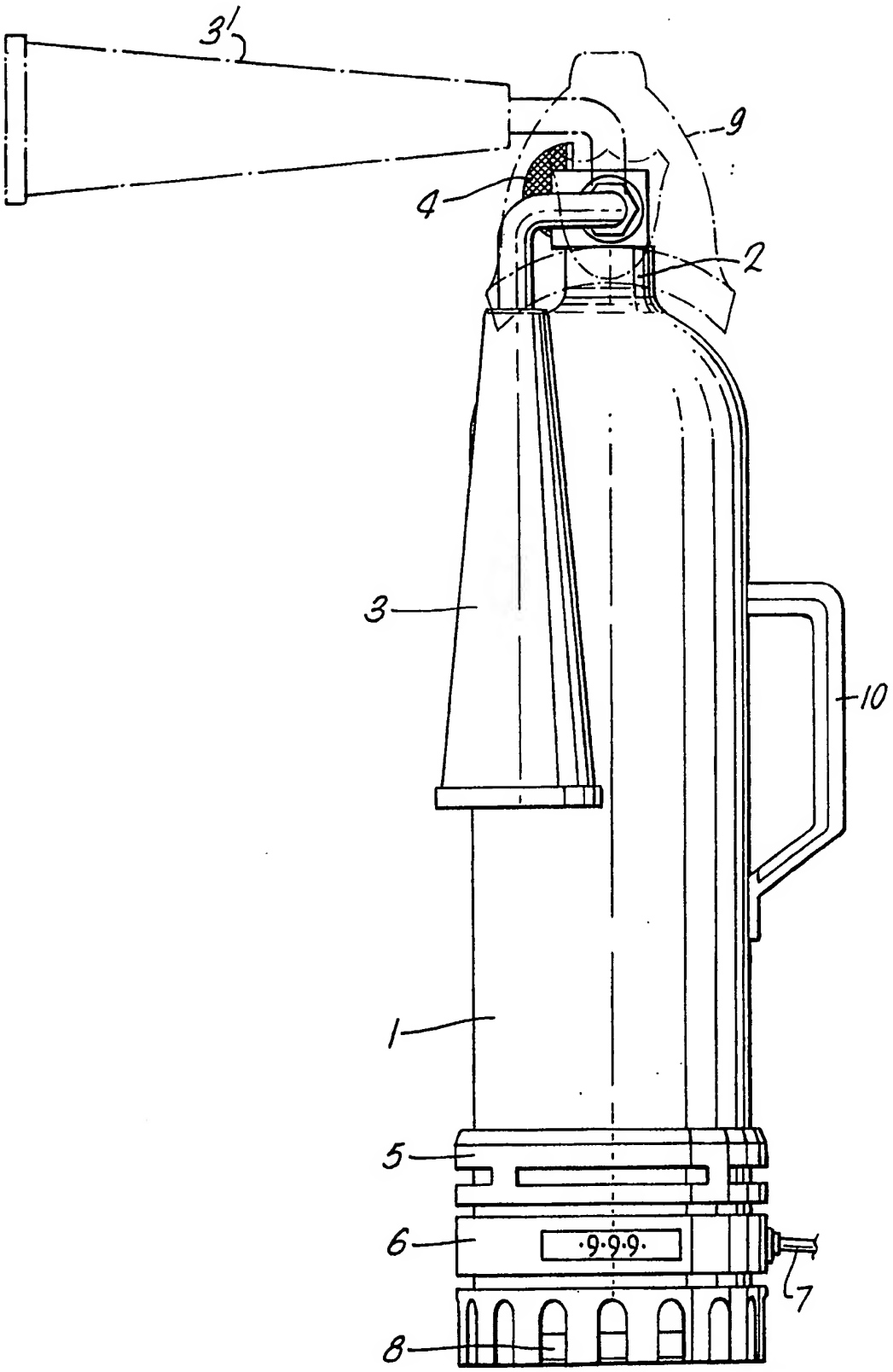
The drawing(s) originally filed was (were) informal and the print here reproduced is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1982.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DESCRIPTION OF INVENTION

Improvements in or relating to safety apparatus

THE PRESENT INVENTION relates to safety apparatus and more particularly relates to safety apparatus in the form of a fire extinguisher.

It has been found that in most domestic fires that occur which are not directly caused by the occupants of the premises, electrical faults are most frequently found to be the cause. If a fire starts because of an electrical fault it is often the case that, as a result of the fault that starts the fire, the fuse or fuses blow.

Thus it is frequently the case that, when a fire occurs, the electrical supply to the premises is interrupted, and it is not possible to utilise the lights.

Whilst some homes are provided with fire extinguishers, it is often difficult to find such a fire extinguisher in a dark smoke filled room, particularly if the lights are not operating, and even if it is possible to find a fire extinguisher it is still difficult to find a way through the dark smoke filled house.

According to this invention there is provided a safety apparatus, said safety apparatus comprising a portable fire extinguisher, said extinguisher incorporating a smoke detector, and alarm means actuated in response to the detection, by the smoke detector, of smoke in excess of a predetermined level.

Preferably said alarm device incorporates an audible alarm, such as a siren.

Conveniently the alarm device includes a visual alarm, such as a flashing light, which may be a blue light.

Preferably an illuminating light which is selectively operable.

Conveniently illuminating device is adapted to be illuminated when a nozzle associated with the fire extinguisher is moved from an ordinary inoperative position to an operative position.

Preferably the nozzle is pivotally mounted on the fire extinguisher and is movable from an inoperative position adjacent a main body part of the fire extinguisher to an operative position in which it projects away from that body part.

The device may include means, operated in response to said smoke detector, to summon, automatically, emergency services, said means comprising a device adapted to automatically to dial the telephone number of the emergency services and to pass a predetermined message to the emergency services.

Preferably a lead is provided connecting the apparatus to a telephone socket, the lead being releasable mounted within a socket present in the apparatus, so that when the apparatus is lifted the lead becomes disconnected from the apparatus.

The device may incorporate one or more rechargeable batteries to provide power for the functions thereof, the batteries being provided with power from

the mains electricity supply through a lead in order to maintain the batteries in a substantially fully charged state, the lead being readily disconnectable from the device.

In order that the invention may be more readily understood, and so that further features thereof may be appreciated, the invention will now be described, by way of example, with reference to the accompanying drawing which is a side view of a fire extinguisher apparatus in accordance with the invention.

Referring initially to the drawings the fire extinguisher apparatus consists of a cylinder 1 filled with a fire-retardent gas, such as carbon dioxide. Pivotally mounted on a neck 2 of the cylinder is a nozzle 3 which can be moved from a normal position, as illustrated, in which the nozzle lies adjacent the cylinder 1, to an operative position 3', shown in phantom. A trigger mechanism (not shown) is provided which can be operated to commence the discharge of carbon dioxide from the cylinder through the nozzle. As thus far described the fire extinguisher is conventional.

Mounted on the neck 2 of the cylinder is an illuminating light 4. The light 4 is adapted to be switched on when the nozzle 3 is raised to its operative position 3' by means of a switch incorporated in the assemly mounted on the neck 2 of the cylinder 1.

Mounted beneath the base of the cylinder 1 is a smoke detector apparatus 5. The smoke detector apparatus may be of any appropriate form.

Mounted beneath the smoke detector apparatus is an automatic dialing device 6, connected to a lead 7

which is connected to a telephone socket. The device 6 is adapted automatically to dial the emergency services, and to repeat a pre-recorded message giving details of the location of the premises. The automatic dialing arrangement 6 is adapted to be activated when the smoke detector 5 detects smoke in excess of a predetermined quantity.

Located below the automatic dialing apparatus 6 is an alarm 8 incorporating a siren or other audible device and a flashing light adapted to provide a blue illuminatio. The alarm 8 is adapted to be actuated when the smoke detector detects smoke in excess of a predetermined level.

It is to be understood that batteries are contained within the described device to provide power for the described components. The batteries may be of the rechargeable type, and the lead 7, in addition to being connected to a telephone socket, may also be connected to a mains electricity supply, to connect that mains supply to a battery charging circuit in order to ensure that the batteries are maintained in a fully charged state.

The neck of the cylinder, and the associated devices mounted thereon may be covered by a cover 9 which is shown in phantom in the accompanying drawing, the cover 9, in this case, resembling a fireman's helmet.

A carrying handle 10 may be provided on the cylinder to facilitate the carrying of the described apparatus.

The lead 7 will be so designed that the end of the lead 7 is plugged into an appropriate socket present

in the described device, in such a way that if the described device is picked up the lead 7 will automatically be disconnected from the device.

It is envisaged that, should a fire arise as a result of an electrical fault, which results in the electricity supply to the premises being broken, the smoke detector 5 will detect the smoke generated by the fire, and will initiate operation of the automatic dialing facility to summon the emergency service, and will also initiate operation of the flashing blue light and will activate the siren or audible alarm.

The occupants of the premises will be alerted to the fact that there is a fire, by the siren, and even if the lights in the house do not work, the occupants will be able to find the fire extinguisher by means of locating the flashing blue light. The device will, in any event, summon the emergency services.

When the fire extinguisher is picked up the cable 7 becomes automatically disconnected, thus enabling the device to be moved swiftly to the seat of the fire. The cover 9 may be removed and discarded, and when the nozzle 3 is moved up to the operating position the illuminating light 4 is illuminated, acting as a torch.

It is envisaged that only one device as described with the automatic dialing be provided in any particular premises, and less-expensive versions, which incorporate the smoke detector, the siron and the flashing blue light may be utilised in those premises to ensure that enough fire extinguishers are available.

While the invention has been described with reference to an embodiment utilising a carbon dioxide

extinguisher it is to be appreciated that embodiments of the invention may incorporate other types of fire extinguisher, such as a dry-power extinguisher, a water extinguisher or a foam extinguisher.

CLAIMS:

1. A safety apparatus, said safety apparatus comprising a portable fire extinguisher, said extinguisher incorporating a smoke detector, and alarm means actuated in response to the detection, by the smoke detector, of smoke in excess of a predetermined level.

2. A safety apparatus according to claim 1 wherein said alarm device incorporates an audible alarm.

3. A safety apparatus according to claim 2 wherein said alarm comprises a siren.

4. A safety device according to any one of the preceding claims wherein the alarm device includes a visual alarm.

5. A safety device according to claim 4 wherein said visual alarm comprises a flashing light.

6. A safety device according to claim 5 wherein said flashing light is a blue light.

7. A safety device according to any one of the preceding claims incorporating an illuminating light which is selectively operable.

8. A safety device according to claim 7 wherein the illuminating device is adapted to be illuminated when a nozzle associated with the fire extinguisher is moved from an ordinary inoperative position to an operative position.

8. A safety device according to claim 8 wherein the nozzle is pivotally mounted on the fire extinguisher and is movable from an inoperative position adjacent a

main body part of the fire extinguisher to an operative position in which it projects away from that body part.

10. A safety apparatus according to any one of the preceding claims including means, operated in response to said smoke detector, to summon, automatically, emergency services, said means comprising a device adapted to automatically to dial the telephone number of the emergency services and to pass a predetermined message to the emergency services.

11. A safety apparatus according to claim 10 wherein a lead is provided connecting the apparatus to a telephone socket, the lead being releasable mounted within a socket present in the apparatus, so that when the apparatus is lifted the lead becomes disconnected from the apparatus.

12. A safety apparatus according to any one of the preceding claims incorporating one or more rechargeable batteries to provide power for the functions thereof, the batteries being provided with power from the mains electricity supply through a lead in order to maintain the batteries in a substantially fully charged state, the lead being readily disconnectable from the device.

13. A safety device substantially as herein described with reference to and as shown in the accompanying drawings.

14. Any novel feature or combination of features disclosed herein.

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